

Marine Corps Hybrid Electric Vehicle Intentions



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USMC Power Needs

- **USMC Force are Expeditionary by Mission**
 - **Deploy from the Sea**
 - **2/3 Air, 1/3 Surface deployed**
 - **Self sustained for 30 days**
- **Largest TQG is 100 kW (fewer in the future)**
- **Less Reliant on “Metal Mountain” & “Diesel River”**
- **Stationary equipment of the past is now mobile**
 - **Radars: 60 kW**
 - **Ops & Command Centers: 20 - 30 kW**



Hybrid Vehicle Fuel Impacts

Daily fuel requirement (gallons): Recalculate MEF Fuel usage by adding low end and optimum projections for both HMMWV (1344) and the Hybrid MTRV (790)

MEF Fuel Usage (for all vehicles)

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Low	Stock	Hybrid	Gal Saved	% Saved	
Assault	1,205,856	1,173,365	32,491	2.69%	
Sustained		950,010	926,951	23,059	2.43%
Optimum	Stock	Hybrid	Gal Saved	% Saved	
Assault	1,205,856	1,149,015	56,841	4.71%	
Sustained		950,010	908,915	41,095	4.33%
Base HMMWV assume 8-9 mpg – Hybrid HMMWV achieves 14-17 mpg					
Stock MTRV assumes 8 mpg – Hybrid truck achieves 10-12 mpg					
Ref: Booz-Allen Technology Study for ONR – Feb 2000					
Tactical Fuel Systems 1998-2000 Study					
TAGOM Hybrid Electric POC Mr. Bob Crow					



Science and Technology

- **Extensive Investment in RST-V**
- **Interest in HE-HMMWV as USMC variant**
- **Advanced Light Strike Vehicle**
 - **Marine Corps Warfighting Lab**
 - **Solicitation closed, FY03 award, possible HEV**
- **ONR - Georgia Tech**
 - **HMMWV class vehicle design excursion**
 - **Advanced automotive technologies**
 - **Hybrid electric / on-board power generation**



Future Vehicle Initiatives

- **Logistic Vehicle System Replacement (LVSR)**
 - RFP on the street
 - Performance Based Specification
 - Bids due October 2003
 - 2nd Quarter, FY 2004 award - up to 2 contract awards
 - FY 2005 - Down-selection to single production source
 - Hybrid Electric is neither specified nor dissuaded
 - Vendor may propose as his competitive solution





Future Vehicle Initiatives

- **Internally Transportable Vehicle (ITV)**
 - **Fiscal Year 2005 program restart**
 - **Will most likely be Performance Based Specification**
 - **Solicitation and evaluation in FY 2004**
 - **Contract(s) award 1st Quarter FY 2005**

**Hybrid Electric neither specified nor dissuaded
Vendor may propose as his competitive solution**

Hybrid Electric Vehicles



Questions ?